

Maintaining Stock Purity

The value of mosquito stocks as such is their genetic composition. Stocks that are contaminated are of little value, especially if the only identifying characteristic is their location of origin. Keeping stocks pure is primarily dependent on conscientious attention to detail. Be very careful when making labels, transferring pupae and adults, putting eggdishes into cages etc. Particularly if your strains are not phenotypically defined, it may be impossible to determine that they are contaminated later. **Your methodology is the only way you will keep from contaminating stocks.** When possible, work with phenotypically marked stocks. Recessive markers are better since contamination is quickly detected.

Typical ways stocks become contaminated:

- Pupae or larvae are still in some device when you switch to handling the next strain. To prevent: visually examine tools, and rinse in hot water (see below) between handling each stock. If you keep only a couple of stocks, separate tools can be kept for each.
- Eggs have sloshed onto the lid of a pan or cup and you use the same lid or cup for another stock without decontamination. To prevent: use fresh lids and cups that are decontaminated by desiccation, washing, and/or autoclaving. Use the same lid for each container after removing.
- Labels on eggdishes have a similar name and/or color and you reverse the insertion into the cages. To prevent: use a different color of tape for each stock. This allows color-coding pans and cages without even writing the name.
- A free adult flies by and into a cage when you are blowing the mosquitoes back in. To prevent: trap free mosquitoes in light traps.
- A free blood-fed female lays eggs in an uncovered pan of eggs. To prevent: cover your larval containers with lids, especially in the early stages.
- Carelessness when labeling or transferring pupae and eggs to containers.



A household device like this HotPot (designed for rapidly heating water) is an inexpensive tool with which to heat-kill larvae and pupae that remain on tools. This one holds a stainless steel sieve used for concentrating larvae and pupae. It is available from cooking supply stores.

Finally:

DOUBLE CHECK EVERYTHING YOU DO. Look at each label twice. Check the aspirators, pipettes, and other tools for contaminants twice.